

PATENT APPLICATION

Section II. (REMARKS)

The pending claims in the application are 1-7 and 10.

Request for Rejoinder Reminder

Applicants respectfully request examination of Species II (claims 1 subspecies (b), 8, 9, and 11-23) of composition claims 1-23 upon allowance of Species I (1 subspecies (a), 2-7 and 10). Applicants acknowledge the Examiner's indication that said search extension is "possible" (see June 2, 2005 Office Action, page 3, lines 1-2).

Further, applicants request rejoinder of method claims 24-52 upon allowance of the composition claims 1-23.¹

Allowable Subject Matter

In the June 2, 2005 Office Action, the Examiner objected to claim 7 as being dependent upon a rejected base claim and indicated that it would be found allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, applicants have amended claim 7 to include all of the limitations of the base claim and any intervening claims. Allowance of claim 7 is respectfully requested.

Provisional Double Patenting Rejection Under the Judicially Created Doctrine of Obviousness-Type Double Patenting

In the June 2, 2005 Office Action, the Examiner provisionally rejected claims 1-2, 5, 8-9 and 11-22 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-17 of copending U.S. Patent Application No. 10/389,214.

Applicants acknowledge same.

¹ Rejoinder was previously requested in the response to the April 18, 2005 Office Action, filed April 27, 2005.

PATENT APPLICATION

Amendment to Claim 1

Claim 1 has been amended herein to move the recitation regarding what the cleaning composition is "useful for" from the preamble to the body of the claim. Accordingly, claim 1 now recites:

"A cleaning composition including an active cleaning combination (ACC) selected from the group consisting of: (a) a quaternary base in combination with at least one of alkali and alkaline earth base; and (b) a strong base in combination with an oxidant, wherein said cleaning composition is useful for removing photoresist and/or sacrificial anti-reflective coating (SARC) materials from a substrate having such material(s) thereon."

No new matter has been added herein.

Rejection of Claims and Traversal Thereof

In the June 2, 2005 Office Action:

claims 1-2, 5, 8-9, and 11-22 were rejected under 35 USC 102(e) as being anticipated by Minsek et al. (U.S. Patent Application Publication No. 20040180300);

claims 1-2, 5, 8-9, 11-20 and 22 were rejected under 35 USC 102(a) as being anticipated by Skee (U.S. Patent No. 6,599,370);

claims 1-6 were rejected under 35 USC 102(b) as being anticipated by Carati et al. (U.S. Patent No. 5,908,968); and

claims 1-5 and 10 were rejected under 35 USC 102(a) as being anticipated by Miller et al. (U.S. Patent No. 6,572,743).

These rejections are traversed and reconsideration of the patentability of the pending claims is requested in light of the following remarks.

Rejections under 35 U.S.C. §102

PATENT APPLICATION

1. In the June 2, 2005 Office Action, claims 1-2, 5, 8-9, and 11-22 were rejected under 35 U.S.C. §102(e) as being anticipated by Minsek et al. (U.S. Patent Application Publication No. 20040180300) (hereinafter Minsek). Applicants traverse such rejection.

Minsek relates to a wet-cleaning composition for removal of photoresist, said wet-cleaning composition including a strong base, an oxidant, and a polar solvent. Strong bases disclosed in Minsek include quaternary hydroxides including ammonium hydroxide, tetramethylammonium hydroxide, and choline hydroxide.

Importantly, Minsek is completely devoid of any disclosure relating to the use of alkali and alkaline earth base(s) in said cleaning composition, as required in applicants' elected claim 1 cleaning composition.

It is well established, as a matter of law, that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Clearly, Minsek, which fails to teach or suggest the inclusion of an alkali and alkaline earth base in the cleaning composition, fails to satisfy this standard.

Withdrawal of the rejection of pending claims 1-2 and 5 under §102 in view of Minsek is respectfully requested.

2. In the June 2, 2005 Office Action, claims 1-2, 5, 8-9, 11-20 and 22 were rejected under 35 U.S.C. §102(a) as being anticipated by Skee (U.S. Patent No. 6,599,370). Applicants traverse such rejection.

Skee relates to aqueous alkaline² compositions useful in the microelectronics industry for stripping or cleaning semiconductor wafer substrates by removing photoresist residues and other unwanted contaminants. The Skee compositions include one or more metal ion-free bases in sufficient amounts to produce a pH of about 10-13 and at least one bath stabilizing agent.

² It is noted that alkaline is defined as "[h]aving a pH greater than 7" (see, <http://www.bartleby.com/61/34/A0203400.html>), which is not synonymous or interchangeable with the term "alkaline earth metal," which is defined as "[a]ny of a group of metallic elements, especially calcium, strontium, magnesium, and barium" (see, <http://www.bartleby.com/61/35/A0203500.html>).

PATENT APPLICATION

Importantly, Skee teaches a metal ion-free solution comprising a metal ion-free base. The recitations in Skee relating to the metal ion-free base are summarized hereinbelow for ease of reference:

- “[t]he compositions typically contain (a) one or more metal ion-free bases . . . (see Skee, Abstract);
- “[t]hese and other objects are achieved using new aqueous compositions for stripping or cleaning semiconductor wafer substrates that contain one or more metal ion-free bases . . . (see Skee, col. 4, lines 13-15);
- “[p]referably, the compositions contain one or more metal ion-free bases . . . (see Skee, col. 4, lines 21-22);
- “[t]he present invention provides new aqueous compositions for stripping or cleaning semiconductor wafer substrates that contain one or more metal ion-free bases . . . (see Skee, col. 6, lines 25-27); and
- “[p]referably, the invention provides aqueous, alkaline stripping or cleaning compositions comprising one or more alkaline metal ion-free base components . . . (see Skee, col. 6, lines 29-32).

It is noted that Skee recites:

“Alkaline solutions containing metal ions such as sodium or potassium may also be operative, but are not preferred because of the possible residual metal contamination that could occur.”
(see Skee, col. 7, lines 27-30)

In other words, Skee repeatedly requires that the aqueous composition be metal ion-free, but then contradicts such clear teaching by reciting that metal ions may be included in said composition. Clearly, such recitation that a species may be included in a composition which is supposed to be devoid of said species is ambiguous.

“It is well established as a matter of law that a rejection on grounds of anticipation cannot be predicated on an ambiguous reference. *In re Turlay*, 134 U.S.P.Q. 355, 360 (CCPA 1962). A reference is effective only for that which it clearly and definitively discloses. Further, if a reference is ambiguous and can be variously interpreted so that it may, in one interpretation, and

PATENT APPLICATION

may not, in another interpretation, constitute an anticipation of an applicant's claim, an anticipation rejection under 35 U.S.C. §102 based on such ambiguous reference is improper. *In re Hughes*, 145 U.S.P.Q. 467 (CCPA 1965).

In the present case, the Skee composition must be metal ion-free however, metal ions may be included. Clearly, there are two different interpretations of this specific Skee teaching and thus Skee does not clearly and definitively disclose that at least one alkali and alkaline earth base must be present in the cleaning composition, as claimed by applicants in claim 1 herein.

Thus, Skee does not anticipate applicants' claim 1, and claims 2-5 and 10 dependent thereunder. Withdrawal of the rejection of pending claims 1-2 and 5 under §102 in view of Skee is respectfully requested.

3. In the June 2, 2005 Office Action, claims 1-6 were rejected under 35 U.S.C. §102(b) as being anticipated by Carati et al. (U.S. Patent No. 5,908,968) (hereinafter Carati). Applicants traverse such rejection.

Carati relates to a process for the hydroisomerization of n-paraffins in the presence of a difunctional catalyst. Importantly, Carati does not relate in any way to the removal of photoresist or SARC materials from a substrate, as claimed by applicants herein.

As noted by the Examiner, "[t]he intended use [of the cleaning composition] in the preamble with respect to "useful for . . ." has no value in the above applied statutory [sic]" (see June 2, 2005 Office Action, page 6, lines 10-11).

As introduced hereinabove, applicants have amended claim 1 to move the recitation regarding what the cleaning composition is "useful for" from the preamble to the body of the claim. Accordingly, the usefulness of said cleaning composition is now a limitation of the claim.

Comparing the Carati teaching with pending claim 1, it can be seen that Carati fails to teach or suggest every limitation of applicants' claim 1, specifically the limitation that the cleaning composition is useful for removing photoresist and/or SARC materials from a substrate having such material(s) thereon.

PATENT APPLICATION

Withdrawal of the rejection of pending claims 1-6 under §102 in view of Carati is respectfully requested.

4. In the June 2, 2005 Office Action, claims 1-5 and 10 were rejected under 35 U.S.C. §102(a) as being anticipated by Miller et al. (U.S. Patent No. 6,572,743) (hereinafter Miller '743). Applicants traverse such rejection.

Miller '743 relates to an electrode assembly for electroplating conducting portions of nonconductors. Importantly, Miller '743 does not relate in any way to the removal of photoresist or SARC materials from a substrate, as claimed by applicants herein.

As noted by the Examiner, "[t]he intended use [of the cleaning composition] in the preamble with respect to "useful for . . ." has no value in the above applied statutory [sic]" (see June 2, 2005 Office Action, page 7, lines 1-2).

As introduced hereinabove, applicants have amended claim 1 to move the recitation regarding what the cleaning composition is "useful for" from the preamble to the body of the claim. Accordingly, the usefulness of said cleaning composition is now a limitation of the claim.

Comparing the Miller '743 teaching with pending claim 1, it can be seen that Miller '743 fails to teach or suggest every limitation of applicants' claim 1, specifically the limitation that the cleaning composition is useful for removing photoresist and/or SARC materials from a substrate having such material(s) thereon.

Withdrawal of the rejection of pending claims 1-5 and 10 under §102 in view of Miller '743 is respectfully requested.

Fees Payable

One (1) dependent claim has been converted into an independent claim herein. Thus, an added claims fee of \$200.00 is due at this time.

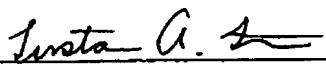
PATENT APPLICATION

The total fee of \$200.00 is authorized to be charged in the attached Credit Card Authorization Form. Authorization is also hereby given to charge any deficiency in applicable fees for this response to Deposit Account No. 08-3284 of Intellectual Property/Technology Law.

Conclusion

Claims 1-7 and 10 are now in form and condition for allowance. Favorable action is requested. If any issues remain, Examiner Le is requested to contact the undersigned attorney at (919) 419-9350 to resolve same.

Respectfully submitted,



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